

IN THE CLAIMS

1. (currently amended). A system for implanting ~~An expandable~~
~~arthroplasty device for use in holding~~ a prosthesis ~~[[within]]~~ into the
intramedullary canal of a bone of a patient, comprising:

a prosthesis for implantation into the intramedullary canal of a bone; and
an expandable arthroplasty device for holding said prosthesis within the
intramedullary canal, said device comprising:

a first section having an outer surface for contacting the interior surface of
[[a]] the bone, an interior surface capable of contacting [[a]] said prosthesis
[[component]] and two end sections;

a second section having an outer surface for contacting the interior
surface of [[a]] the bone, an interior surface capable of contacting [[a]] said
prosthesis [[component]], and two end sections;

adjusting means, associated with said end sections of said first and
second sections, capable of shifting said first and second sections between a first
unactuated position and a second actuated position in which the outer surfaces
of said first and second sections contact opposing interior surfaces of [[a]] the
bone;

and activating means for operating said adjusting means.

2. (currently amended). The [[device]] system of claim 1, wherein said
adjusting means comprises a pair of first screws each of which is threadedly
engaged with one end section of said first and second sections.

3. (currently amended). The [[device]] system of claim [[1]] 2, wherein said activating means comprises a pair of second screws each of which is coupled to one of said first screws such that rotation of one of said second pair of screws will cause rotation of its associated first screw.

4. (currently amended). The [[device]] system of claim 1, wherein said interior surfaces of said first and second sections are tapered.

5. (currently amended). The [[device]] system of claim 4, wherein when said device is in its actuated position, said prosthesis can be held tightly in place between said tapered interior surfaces of said first and second sections.

6. (new). An expandable arthroplasty device for use in holding a prosthesis within the intramedullary canal of a bone, comprising:

a first section having an outer surface for contacting the interior surface of a bone, an interior surface capable of contacting a prosthesis component, and two end sections;

a second section having an outer surface for contacting the interior surface of a bone, an interior surface capable of contacting a prosthesis component, and two end sections;

adjusting means, associated with said end sections of said first and second sections, capable of shifting said first and second sections between a first unactuated position and a second actuated position in which the outer surfaces of said first and second sections contact opposing interior surfaces of a bone, said adjusting means comprising a pair of first screws each of which is threadedly engaged with one end section of said first and second sections, and a

pair of second screws each of which is coupled to one of said first screws such that rotation of one of said second pair of screws will cause rotation of its associated first screw.

7. (new). The device of claim 6, wherein said activating means comprises a wrench.

8. (new). The device of claim 6, wherein the plane of operation of said first screws is essentially perpendicular to the plane of operation of said second screws.

9. (new). The system of claim 1, wherein said activating means comprises a wrench.

10. (new). An expandable arthroplasty device for use in holding a prosthesis within an intramedullary canal of a bone containing cancellous bone, comprising:

a first section having an outer surface for contacting the interior surface of the intramedullary canal of a bone, an interior surface capable of contacting a prosthesis component, a distal end section, and a proximal end section;

a second section having an outer surface for contacting the interior surface of the intramedullary canal of a bone, an interior surface capable of contacting a prosthesis component, a distal end section and a proximal end section;

adjusting means, associated with said proximal end sections of said first and second sections and capable of moving said first and second sections essentially parallel to one another between a first unactuated position and a

second actuated position in which the outer surfaces of said first and second sections contact opposing interior surfaces of the intramedullary canal, comprising a first adjuster for moving said first and second sections essentially parallel to each other, and a second adjuster, operating in a plane essentially perpendicular to the operating plane of said first adjuster, for operating said first adjuster, and activating means for operating said adjusting means,

such that when said activating means operates said adjusting means, the cancellous bone within the intramedullary canal is compacted against the interior surface of the intramedullary canal as said first and second sections are moved to said second actuated position.

11. (new). The device of claim 10, wherein said interior surfaces of said first and second sections are tapered.

12. (new). The device of claim 11, wherein when said device is in its actuated position, a prosthesis can be tightly held in place between said tapered interior surfaces of said first and second sections.